

We claim:

1. A method of automatically detecting and correcting communication errors which result in an electronic shelf label's (ESL's) registers storing incorrect data, the method comprising the steps of:

- (a) transmitting a message to the ESL by a host computer;
- (b) waiting for a response to the message;
- (c) if the response is a negative acknowledgement or no response is received by the host computer, retransmitting the message;
- (d) if the response appears to be a positive acknowledgement, transmitting a verification message to verify the contents of the ESL's registers;
- (e) waiting for a response to the verification message; and
- (f) if the response to the verification message is positive acknowledgement, logging the message as successfully received.

2. The method of claim 1 further comprising the step of:

- (g) if the response to the verification message is a negative acknowledgement or no response is received by the host computer, retransmitting the message.

3. The method of claim 2 further comprising the step of:

- (h) if the response to the retransmitted message is a negative acknowledgement or no response is received by the host computer, providing an indication of a communication problem.

4. The method of claim 1 wherein the message is a command to update at least one of the ESL's registers.

5. The method of claim 1 wherein the verification message is a data bedcheck message.

6. The method of claim 1 wherein the step of transmitting a verification message immediately follows the receipt of the positive acknowledgement.

7. An electronic shelf label (ESL) system comprising:
an ESL for displaying information relating to an item associated with the ESL, the ESL including a plurality of registers for storing information controlling the content and formatting of the information displayed; and

a host computer system transmitting a message to the ESL, waiting for a response to the message, retransmitting the message if the response is a negative acknowledgement or no response is received, and transmitting a verification message to verify the contents of the ESL's registers if the response appears to be a positive acknowledgement.

8. The system of claim 7 wherein the host computer waits for a response to the verification message, and if the response to the verification message is positive acknowledgement, logging the message as successfully received.

9. The system of claim 7 wherein the message is a command to update at least one of the ESL's registers.

10. The system of claim 7 wherein the verification message is a data bedcheck message.

11. The system of claim 7 wherein host computer transmits the verification message immediately following the receipt of the positive acknowledgement.

12. A method of automatically detecting and correcting communication errors which result in an electronic shelf label's (ESL's) registers storing incorrect data, the method comprising the steps of:

- (a) transmitting a message containing data to be stored in one or more registers of the ESL by a host computer;
- (b) waiting for a response to the message;
- (c) if the response is a negative acknowledgement that the data was not correctly stored or no response is received by the host computer, retransmitting the message;
- (d) if the response appears to be a positive acknowledgement that the message was received and the data correctly stored, transmitting a verification message to verify the contents of the ESL's registers;
- (e) waiting for a response to the verification message; and
- (f) if the response to the verification message is positive acknowledgement verifying that the ESL's registers contained the expected data, logging the message as successfully received.

13. The method of claim 12 further comprising the step of:

- (g) if the response to the verification message is a negative acknowledgement or no response is received by the host computer, retransmitting the message.

14. The method of claim 13 further comprising the step of:

- (h) if the response to the retransmitted message is a negative acknowledgement or no response is received by the host computer, providing an indication of a communication problem.

15. The method of claim 12 wherein the step of transmitting a verification message immediately follows the receipt of the positive acknowledgement.

16. The method of claim 13 wherein steps (a) through (g) are repeated a plurality of times and further comprising the step of:

tabulating statistical data of the number of times the response was a negative acknowledgement or no response was received; and

Age	Sex	Height (cm)	Weight (kg)	Body mass index (kg/m ²)	Waist circumference (cm)	Hip circumference (cm)	Waist:hip ratio	Waist:height ratio	Waist:weight ratio	Waist:height:weight ratio
20	M	170	65	22.6	85	95	0.89	0.12	0.01	0.0001
25	M	175	75	24.5	90	100	0.90	0.13	0.01	0.0001
30	M	180	85	26.4	95	105	0.91	0.14	0.01	0.0001
35	M	185	95	28.3	100	110	0.92	0.15	0.01	0.0001
40	M	190	105	30.2	105	115	0.93	0.16	0.01	0.0001
45	M	195	115	32.1	110	120	0.94	0.17	0.01	0.0001
50	M	200	125	34.0	115	125	0.95	0.18	0.01	0.0001
55	M	205	135	35.9	120	130	0.96	0.19	0.01	0.0001
60	M	210	145	37.8	125	135	0.97	0.20	0.01	0.0001
65	M	215	155	39.7	130	140	0.98	0.21	0.01	0.0001
70	M	220	165	41.6	135	145	0.99	0.22	0.01	0.0001
75	M	225	175	43.5	140	150	1.00	0.23	0.01	0.0001
80	M	230	185	45.4	145	155	1.01	0.24	0.01	0.0001
85	M	235	195	47.3	150	160	1.02	0.25	0.01	0.0001
90	M	240	205	49.2	155	165	1.03	0.26	0.01	0.0001
95	M	245	215	51.1	160	170	1.04	0.27	0.01	0.0001
100	M	250	225	53.0	165	175	1.05	0.28	0.01	0.0001
105	M	255	235	54.9	170	180	1.06	0.29	0.01	0.0001
110	M	260	245	56.8	175	185	1.07	0.30	0.01	0.0001
115	M	265	255	58.7	180	190	1.08	0.31	0.01	0.0001
120	M	270	265	60.6	185	195	1.09	0.32	0.01	0.0001
125	M	275	275	62.5	190	200	1.10	0.33	0.01	0.0001
130	M	280	285	64.4	195	205	1.11	0.34	0.01	0.0001
135	M	285	295	66.3	200	210	1.12	0.35	0.01	0.0001
140	M	290	305	68.2	205	215	1.13	0.36	0.01	0.0001
145	M	295	315	70.1	210	220	1.14	0.37	0.01	0.0001
150	M	300	325	72.0	215	225	1.15	0.38	0.01	0.0001
155	M	305	335	73.9	220	230	1.16	0.39	0.01	0.0001
160	M	310	345	75.8	225	235	1.17	0.40	0.01	0.0001
165	M	315	355	77.7	230	240	1.18	0.41	0.01	0.0001
170	M	320	365	79.6	235	245	1.19	0.42	0.01	0.0001
175	M	325	375	81.5	240	250	1.20	0.43	0.01	0.0001
180	M	330	385	83.4	245	255	1.21	0.44	0.01	0.0001
185	M	335	395	85.3	250	260	1.22	0.45	0.01	0.0001
190	M	340	405	87.2	255	265	1.23	0.46	0.01	0.0001
195	M	345	415	89.1	260	270	1.24	0.47	0.01	0.0001
200	M									